

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**Present Application:**

Applicants : Horst Fischer and Beate Illek  
Title : COMPOSITIONS AND METHODS FOR CYSTIC FIBROSIS  
THERAPY  
Docket No. : 200116.403D1  
Date : October 17, 2001

**Prior Application:**

Examiner : Howard Owens, Jr.  
Art Unit : 1623  
Application No. : 09/174,077

Box Patent Application  
Commissioner for Patents  
Washington, DC 20231

**PRELIMINARY AMENDMENT**

Commissioner for Patents:

Please amend the above-identified application as follows:

**In the Specification**

Please replace the paragraph beginning at page 1, line 5, with the following rewritten paragraph:

This application is a divisional of U.S. Serial Number 09/174,077, filed October 16, 1998, now allowed; which is a continuation-in-part of U.S. Serial Number 08/951,912, filed October 16, 1997, now issued as U.S. Patent No. 5,972,995.

In the Claims:

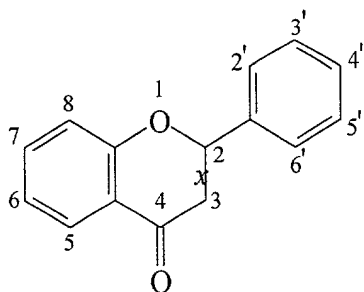
Please cancel claims 1-29 and 45-51.

Please amend claims 31 and 57 to read as follows:

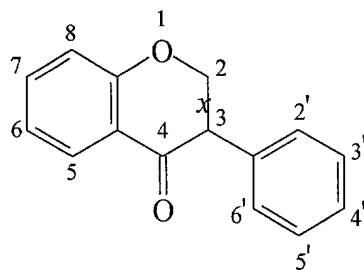
31. (Amended) A method according to claim 30, wherein the compound

is:

(a) a polyphenolic compound having the formula:



or

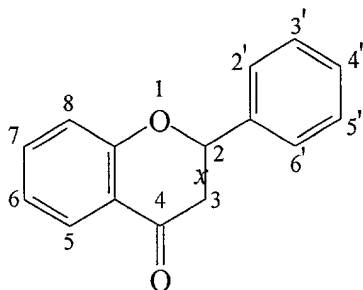


wherein carbon atoms at positions 2, 3, 5, 6, 7, 8, 2', 3', 4', 5' and 6' are bonded to a moiety independently selected from the group consisting of hydrogen atoms, hydroxyl groups and methoxyl groups, and wherein X is a single bond or a double bond; or

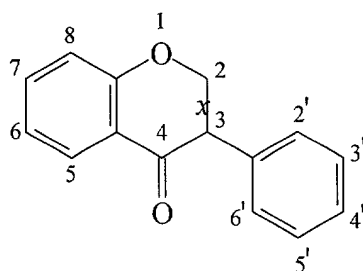
(b) a stereoisomer of any of the foregoing polyphenolic compounds.

57. (Amended) A pharmaceutical composition for treatment of cystic fibrosis, comprising:

(a) a polyphenolic compound having the formula:



or



wherein carbon atoms at positions 2, 3, 5, 6, 7, 8, 2', 3', 4', 5' and 6' are bonded to a moiety independently selected from the group consisting of hydrogen atoms, hydroxyl groups and methoxyl groups, and wherein X is a single bond or a double bond; or a stereoisomer of any of the foregoing polyphenolic compounds;

- (b) a compound selected from the group consisting of resveratrol, ascorbic acid, ascorbate salts and dehydroascorbic acid; and
- (c) a physiologically acceptable carrier.

Kindly add new claims 58-64 as follows:

58. (New) A composition comprising:

- (a) one or more flavones or isoflavones capable of stimulating chloride secretion;
- (b) one or more of:
  - (i) a compound that increases expression of a CFTR in an epithelial cell; and/or
  - (ii) a chemical chaperone that increases trafficking of a CFTR to a plasma membrane in an epithelial cell; and
- (c) a physiologically acceptable carrier.

59. (New) A composition comprising:

- (a) genistein;
- (b) one or more of:

(i) a compound that increases expression of a CFTR in an epithelial cell; and/or

(ii) a chemical chaperone that increases trafficking of a CFTR to a plasma membrane in an epithelial cell; and

- (c) a physiologically acceptable carrier.

60. (New) A composition comprising:

- (a) quercetin;
- (b) one or more of:

(i) a compound that increases expression of a CFTR in an epithelial cell; and/or

(ii) a chemical chaperone that increases trafficking of a CFTR to a plasma membrane in an epithelial cell; and

- (c) a physiologically acceptable carrier.

61. (New) A composition comprising:

- (a) apigenin;
- (b) one or more of:

(i) a compound that increases expression of a CFTR in an epithelial cell; and/or

(ii) a chemical chaperone that increases trafficking of a CFTR to a plasma membrane in an epithelial cell; and

- (c) a physiologically acceptable carrier.

62. (New) A composition comprising:

(a) kaempferol;

(b) one or more of:

(i) a compound that increases expression of a CFTR in an epithelial cell; and/or

(ii) a chemical chaperone that increases trafficking of a CFTR to a plasma membrane in an epithelial cell; and

(c) a physiologically acceptable carrier.

63. (New) A composition comprising:

(a) biochanin A;

(b) one or more of:

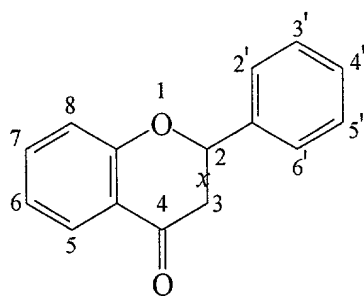
(i) a compound that increases expression of a CFTR in an epithelial cell; and/or

(ii) a chemical chaperone that increases trafficking of a CFTR to a plasma membrane in an epithelial cell; and

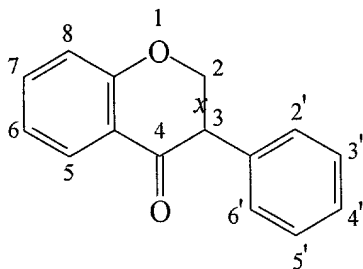
(c) a physiologically acceptable carrier.

64. (New) A composition comprising:

(a) a polyphenolic compound having the formula:



or



wherein carbon atoms at positions 2, 3, 5, 6, 7, 8, 2', 3', 4', 5' and 6' are bonded to a moiety independently selected from the group consisting of hydrogen atoms, hydroxyl groups and methoxyl groups, and wherein X is a single bond or a double bond; or a stereoisomer of any of the foregoing polyphenolic compounds;

(b) a compound selected from the group consisting of resveratrol, ascorbic acid, ascorbate salts and dehydroascorbic acid; and

(c) a physiologically acceptable carrier.

#### REMARKS

The present application is a divisional of now allowed U.S. Serial Number 09/174,077; which is a continuation-in-part of U.S. Patent No. 5,972,995. The "CROSS-REFERENCES TO RELATED APPLICATIONS" section of the present application has been amended to reflect this status, and to update the section by correcting a typographical error regarding the date of filing of U.S. Patent No. 5,972,995 and indicating the current status of the other referenced application.

Claims 1-29 and 45-51 have been cancelled in this application. Claims 31 and 57 have been amended. New claims 58-64 have been added.


Attached hereto is a marked-up version of the changes made to the specification and claims by the current preliminary amendment. The attached page is captioned "**Version With Markings to Show Changes Made.**"

All of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Should any issue require attention prior to examination, the Examiner is requested to contact the undersigned at (206) 622-4900 to resolve the matter.

Respectfully submitted,

Seed Intellectual Property Law Group PLLC

  
\_\_\_\_\_  
James M. Verna, Ph.D.  
Registration No. 33,287

JMV:jto

701 Fifth Avenue, Suite 6300  
Seattle, Washington 98104-7092  
Phone: (206) 622-4900  
Fax: (206) 682-6031

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

Please replace the paragraph beginning at page 1, line 5, with the following rewritten paragraph:

This application is a divisional of U.S. Serial Number 09/174,077, filed October 16, 1998, now allowed; which is a continuation-in-part of U.S. Serial Number 08/951,912, filed October 16, 1997 [8], now issued as U.S. Patent No. 5,972,995.

In the Claims:

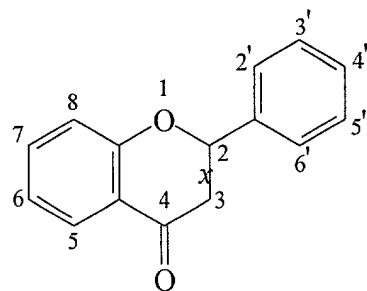
Claims 1-29 and 45-51 have been canceled.

Claims 31 and 57 have been amended as follows:

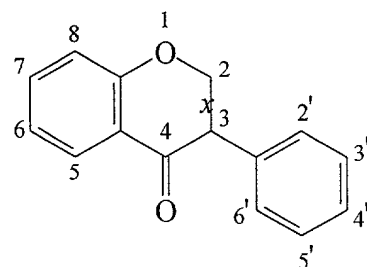
31. (Amended) A method according to claim 30, wherein the compound

is:

(a) a polyphenolic compound having the [general] formula:



or



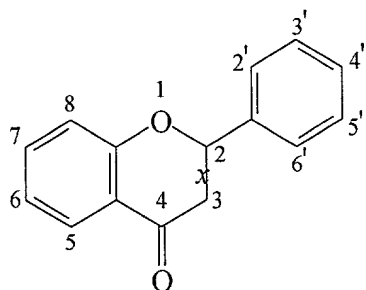


wherein carbon atoms at positions 2, 3, 5, 6, 7, 8, 2', 3', 4', 5' and 6' are bonded to a moiety independently selected from the group consisting of hydrogen atoms, hydroxyl groups and methoxyl groups, and wherein X is a single bond or a double bond; or

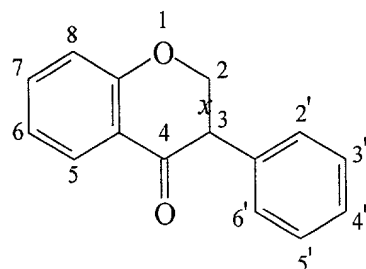
(b) a stereoisomer [or glycoside derivative] of any of the foregoing polyphenolic compounds.

57. (Amended) A pharmaceutical composition for treatment of cystic fibrosis, comprising:

(a) a polyphenolic compound having the [general] formula:



or



wherein carbon atoms at positions 2, 3, 5, 6, 7, 8, 2', 3', 4', 5' and 6' are bonded to a moiety independently selected from the group consisting of hydrogen atoms, hydroxyl groups and methoxyl groups, and wherein X is a single bond or a double bond; or a stereoisomer [or glycoside derivative] of any of the foregoing polyphenolic compounds;

(b) a compound selected from the group consisting of resveratrol, ascorbic acid, ascorbate salts and dehydroascorbic acid; and

(c) a physiologically acceptable carrier.